

WHAT IS CLAIMED IS:

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1. A method of recording eccentricity correction data for position control over a recording and reproducing head on a disk-shaped recording medium having at least one user data recording area to record user data, the method comprising the step of:
recording the eccentricity correction data in a user data recording area.

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2. The method as claimed in claim 1, wherein the eccentricity correction data are recorded for all cylinders of the disk-shaped recording medium.

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3. The method as claimed in claim 1, wherein the eccentricity correction data are recorded in only predetermined one or more cylinders of the disk-shaped recording medium.

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4. The method as claimed in claim 1, wherein the eccentricity correction data are recorded as initial eccentricity correction data, and the initial eccentricity correction data are

updated as needed during an operation on the disk-shaped recording medium.

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5. The method as claimed in claim 1,
wherein the eccentricity correction data are
recorded for each frequency component individually.

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15 6. The method as claimed in claim 1,
wherein the eccentricity correction data are
recorded in one or more sectors for each cylinder.

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25 7. The method as claimed in claim 1,
wherein the eccentricity correction data are
recorded for each cylinder, and the eccentricity
correction data comprise at least one of
eccentricity correction data on the cylinder and
eccentricity correction data on a next cylinder
recorded next to the cylinder in accordance with a
sequential recording manner.

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35 8. The method as claimed in claim 1,
wherein the eccentricity correction data are
recorded in a center area of each cylinder.

9. A disk-shaped recording medium having
at least one user data recording area to record user
5 data, comprising:

eccentricity correction data being
recorded in a user data recording area.

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10. The disk-shaped recording medium as
claimed in claim 9, wherein the eccentricity
correction data are recorded in all cylinders of the
15 disk-shaped recording medium.

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11. The disk-shaped recording medium as
claimed in claim 9, wherein the eccentricity
correction data are recorded in only predetermined
one or more cylinders of the disk-shaped recording
medium.

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12. The disk-shaped recording medium as
30 claimed in claim 9, wherein the eccentricity
correction data are recorded as initial eccentricity
correction data, and the initial eccentricity
correction data are updated as needed during an
operation on the disk-shaped recording medium.

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13. The disk-shaped recording medium as
claimed in claim 9, wherein the eccentricity
correction data are recorded for each frequency
5 component individually.

10 14. The disk-shaped recording medium as
claimed in claim 9, wherein the eccentricity
correction data are recorded in one or more sectors
for each cylinder.

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16. The disk-shaped recording medium as
claimed in claim 9, wherein the eccentricity
20 correction data are recorded for each cylinder, and
the eccentricity correction data comprise at least
one of eccentricity correction data on the cylinder
and eccentricity correction data on a next cylinder
recorded next to the cylinder in accordance with a
25 sequential recording manner.

30 16. The disk-shaped recording medium as
claimed in claim 9, wherein the eccentricity
correction data are recorded in a center area of
each cylinder.

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17. A method of controlling a position of
a recording and reproducing head on a disk-shaped
recording medium having at least one user data
recording area to record user data, the method
5 comprising the step of:

controlling the position of the recording
and reproducing head based on eccentricity
correction data recorded in a user data recording
area.

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18. The method as claimed in claim 17,
15 wherein the eccentricity correction data are
recorded in all cylinders of the disk-shaped
recording medium.

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19. The disk-shaped recording medium as
claimed in claim 17, wherein the eccentricity
correction data are recorded in only predetermined
25 one or more cylinders of the disk-shaped recording
medium.

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20. An information recording and
reproducing apparatus, comprising:

a disk-shaped recording medium having at
least one user data recording area to record user
35 data, the disk-shaped recording medium comprising
eccentricity correction data being recorded in a
user data recording area.